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T. J. Hansen
South Dakota State University, timothy.hansen@sdstate.edu

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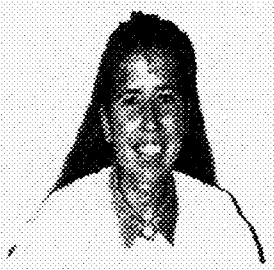

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T. J. Hansen
Research Associate

Property taxes are traditionally the primary revenue source for public operations at the local level. In South Dakota, property taxes are directly related to one of the state's main industries – agriculture. Since farming and ranching are land-intensive operations, agricultural operators bear property tax burdens accordingly.

South Dakota agricultural land is currently assessed based on the market value of comparable area properties. The Department of Revenue defines market value as "the cash price a property would bring in a competitive and open market in which sufficient time has been allowed for a sale; the buyer and seller are not subject to undue pressure; and both are well informed." County assessors begin with a countywide dollar per acre value for agricultural land and make local adjustments in regard to the quality of the land. Structures are similarly assessed (base value and local adjustments) according to construction type, property condition, and structural quality.

The market value system has been in existence for many years, over which several strengths and weaknesses have surfaced. Critics argue that this method of assessment results in land values rising more rapidly than productivity values. For example, states that use market value assessment generally rely on the sales of comparable area properties to value similar properties. Therefore, when a robust land market results in higher sales, assessments rise and larger tax burdens result.

The South Dakota legislature has recently approved a pilot study to assess agricultural lands according to their income-generating capacity. In many agriculturally oriented states, this form of differential assessment has been adopted to insulate agricultural land values from substantial annual assessment increases and to keep urban fringe lands in agricultural use. The assessment methods used by neighboring states are as varied as the states themselves. Nevertheless, these approaches are useful references as South Dakota considers adopting income-based assessment of agricultural land. The remainder of this article gives an overview of regional assessment methods and introduces South Dakota's pilot program.

Regional Assessment Methods

Minnesota assesses agricultural lands using a market approach. This approach is based upon comparable sales data from agricultural lands outside of the seven metropolitan counties. To be termed "comparable", the agricultural lands must share similarities with the agricultural land being assessed in terms of soil types, number of degree days, and other agricultural characteristics. When the agricultural land is assessed, the assessor is not to consider any nonagricultural factors.

While **Iowa** relies on fair market value assessment for residential, commercial, and industrial real estate, agricultural real estate is assessed at 100 percent of its productivity and net earning capacity using an income capitalization approach. The income capitalization approach requires crop harvest data collection for the five years between equalization of assessments. County agricultural acreage and yield information by commodity is obtained from the Iowa Agricultural Statistics Service, U.S. Census of Agriculture, and U.S. Farm Service Agency (FSA). County gross income is then computed by multiplying one-half of the 5-year average production of the commodity by the 5-year average price of the commodity. County price adjustments are made if individual county price conditions warrant such adjustments. This method is followed for corn, soybeans, and oats. A calculated cash rental value of hay is obtained via five years of acreage, yield, and price information.

This value is then multiplied by the 5-year average acreage of tillable or nontillable pasture to obtain gross income of tillable or nontillable pasture respectively. Income generated by other acres is calculated by multiplying the number of other acres times 17 percent of the net income per acre for all other land uses. Gross income from government payments is equal to one-half of the 5-year average of government payments as reported by the FSA.

Iowa county gross income is ultimately equal to the sum of the gross incomes from commodities, pastures, other acres, and government payments. County production costs (landlord costs, fertilizer costs, liability insurance, etc.) are totaled and subtracted from county gross income to arrive at county net income. County net income is then reduced by 10.6 percent as a dwelling adjustment. The adjusted county net income is then reduced by the 5-year average per acre real estate taxes levied for land and structures. This includes drainage and levee district taxes but excludes those taxes imposed on agricultural dwellings. The county valuation per acre is then determined by dividing this value by the capitalization rate specified in Iowa Code section 441.21. Application of Iowa's income capitalization approach has divided the tax revenue responsibility as follows: residential (46%), commercial and industrial (23%), agricultural (21%), and utilities/railroads (10%).

Agricultural land and other real property in **Nebraska** are market value assessed. According to the Nebraska Department of Property Assessment and Taxation, "the actual (market) value of a parcel of real property is the most probable price expressed in terms of money that a property will bring if exposed for sale in the open market in an arm's length transaction between a willing seller and a willing buyer, both of whom are knowledgeable concerning all the uses to which it is adapted and for which it is capable of being used." (Ag Land, 1) Nebraska assessors combine several appraisal techniques including: similar properties sales comparison, location and zoning review, cost evaluation, income analysis, and current use examination. Agricultural land includes land which is generally used for producing grain and feed crops, forages and sod crops, and animals. Agricultural land joins horticultural land as preferentially treated land, valued at 80 percent of their market value. Other real property including farm sites and home sites are valued at 100 percent of their market value.

Wyoming has been using a productivity-based system of assessing agricultural lands since 1984. The lands are assessed according to a three-step process and taxed based on their average productive capacity under normal conditions. First, property ownership is determined and it is verified that the land is agricultural in type. After land has been classified as agricultural, its use (irrigated cropland, dry cropland, or rangeland) or combination of uses must be identified via aerial photography and other materials. Productivity is then calculated based on the use determined in the second step. For example, irrigated cropland is valued based on the net value per ton of hay; dry cropland is valued based on the net value per bushel of wheat; and rangeland is valued based on the net value per Animal Unit Months (AUM) as described in the 2000 Wyoming Agricultural Land Valuation Study. Finally, the product of the yield per acre and the net value for each use is divided by the capitalization rate (5-year weighted average of Farm Credit Services of Omaha's Long Term Portfolio rates) to calculate a land value per acre for each respective use. Since Wyoming is a fractional assessment state, the taxable value is a fraction (9.5%) of this calculated land value per acre.

Montana's agricultural land is divided into 2 classes by the 160 acres reference point. A tract of land that is less than 160 acres in size is generally valued at market value. However, if the landowner can provide supporting documentation to prove that this land annually produces $1500 or more in gross income from agricultural products, it qualifies as agricultural land. Once the landowner applies and is approved for this agricultural land classification, the land is then valued according to its productive capacity (calculated according to formulas and methodology approved by the Montana legislature), rather than its market value. By qualifying as agricultural land, the land is taxed at a rate of 3.627 percent of its productive capacity. If the landowner fails to comply with either the income standard or application provision, the parcel is defined as non-qualifying agricultural land. The "non-qualifying" distinction subjects the land to valuation at the average statewide grade of grazing land and taxation at seven times the taxable rate for qualifying agricultural land (7 x 3.627% = 25.389%). For non-qualifying agricultural land, one acre of land is removed for residential buildings. The single acre and buildings are valued at market value and taxed at 3.627 percent of this market value. The other class of agricultural land includes parcels greater than 160 acres in size that are not used for residential, commercial, or industrial use.

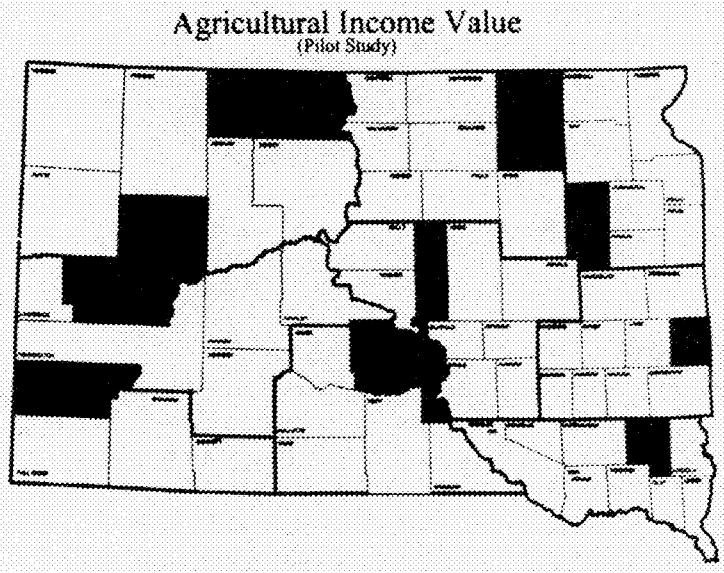
This agricultural land is valued according to its productive capacity, with values varying depending on use as grazing, dry farmland, irrigated farmland, etc. The taxable percentage for this type of land is 3.627 percent of its productive capacity. A single acre residential exclusion provision also exists for parcels greater than 160 acres. Any buildings are valued at market value and the single acre falls into the highest valued statewide class and grade for agricultural land. Montana's most recent reappraisal was to have been completed by December 31, 1996 with those values in use through 2000.

North Dakota values agricultural land by an income capitalization approach. Under this system, the capitalized value represents the landowner's share of gross returns per acre. The state's model primarily relies upon data from North Dakota's Agricultural Statistics Service, FSA, and Natural Resources Conservation Service (NRCS). County annual crop production and regional annual market prices from each crop reporting district are used to calculate county cropland revenue. In addition, rangeland and pasture acreage estimates are multiplied by gross income potential values based on animal unit carrying capacities per acre to calculate county noncropland revenue. The 2000 North Dakota model uses the most recent ten years of data and omits the high and low revenue years from the cropland and noncropland sides. The average annual gross returns for cropland are determined from the remaining eight years of data using the following equation: 0.2 (Annual Gross Income Sugar Beets and Potatoes) + 0.3 (Annual Gross Income from Other Crops) + 0.5 (Annual Gross Income from CRP). For irrigated cropland, the annual gross return is 50 percent of dry cropland due to the added irrigation expense. When the average annual gross returns per acre of cropland is divided by the capitalization rate (average of most recent 12 years federal land bank mortgage interest rates after dropping high and low years), a cropland value per acre is obtained. A noncropland value per acre is similarly calculated with the numerator equal to 25 percent of the 8-year average noncropland revenue previously calculated divided by the average capitalization rate. Ultimately, the average value per acre for all agricultural land in a county is calculated by weighting the average cropland and noncropland values per acre by the number of noncropland and cropland acres in a county.

Introduction to South Dakota's pilot program

During the seventy-fifth legislative session, a pilot study of assessing agricultural land by its income-generating ability was approved. One pilot county from each of South Dakota's Agricultural Statistics Districts was named in House Bill #1005. These counties and their respective districts as pictured in Figure 1 include: Brown (north central), Clark (northeast), Corson (northwest), Custer (southwest), Hyde (central), Lyman (south central), Meade (west central), Moody (east central), and Turner (southeast).

Figure 1:



Data from each of the pilot counties is currently being integrated in a version of the income-based agricultural land assessment model used by North Dakota. The cropland portion for South Dakota will include crops planted, acres planted, acres harvested, crop yields, and production totals as reported by the South Dakota Agricultural Statistics Service (SDASS). When possible, USDA loan rate prices will be used as "base" prices for each commodity. Other prices being used will be obtained via SDASS publications. Based on this information, total revenue for each commodity will be summed to compute each county's annual cropland total revenue and acres planted. This information will be combined with other cropland income sources (government and CRP payments) to calculate the annual cropland gross returns for each pilot county. The noncropland portion will combine NRCS data for range acres, pasture acres, range AUM, and pasture AUM with grazing assumptions and SDASS average livestock prices for calves and cull cows. As a result, an annual noncropland gross returns value will be obtained for each pilot county.

House Bill #1005 states that the landowner's share of gross returns for cropland and noncropland will be 30 percent and 25 percent respectively.

The study will include data from years 1992 – 1999 for each of the pilot counties. However, only six years of data will be used to assess S. D. agricultural lands once the highest and lowest revenue values on the cropland and noncropland sides have been omitted. This adjustment aids in minimizing large annual fluctuations in the landowner's share of gross returns. The data will also be adjusted according to a cost of production index to account for general economic changes. This calculated value will then be divided by a capitalization rate of 6 percent as legislated. Finally, the value will be weighted via cropland and noncropland acreage reported at the pilot county level to determine the capitalized average value of agricultural land in each pilot county.

Concluding Thoughts

South Dakota and its neighboring states exhibit a variety of approaches to assessing agricultural lands. It has been shown that assessing agricultural lands according to income-generating capacity is a concept already in practice in some neighboring states. Other states, such as Minnesota and Nebraska, continue to assess agricultural land according to market value. During the next year, an income capitalization approach will be explored and compared to South Dakota's current market value system via the pilot study. A "taxing" task then lies ahead of the state legislature as it debates the agricultural land assessment topic and proposes avenues for South Dakota's property tax future.

Sources:

Iowa Administrative Code. Chapter 71, p. 6-9, Revenue and Finance [701]. December 17, 1986 and November 5, 1997.

Minnesota Statutes web site.
http://www.revisor.leg.state.mn.us:8181
Chapter Title: TAXES, LISTING, ASSESSMENT
Sections: 273.11, 273.111, and 273.17

Montana Department of Revenue web site:
http://www.state.mt.us/revenue/property_faqs.htm
June 26, 2000, p. 1-12.

Nebraska Department of Property Assessment &Taxation web site: **http://pat.nol.org/info/agland.htm** July 13, 2000, p. 1-2.

North Dakota Office of State Tax Commissioner Property Tax Guideline "Valuation Concepts – Agricultural" October 1997, p. G22-G23.

South Dakota Department of Revenue web site:
http://www.state.sd.us/revenue/Publications/assess1199.pdf Summary of the Assessment Process July 20, 2000 p. 1-2.

South Dakota Legislative Research Council web site:
http://www.state.sd.us/state/legis/lrc/lawstat/https/75/bills/HB1005ENR.htm House Bill #1005 May 19, 2000, p. 1-4.

Wyoming state web site:
http://revenue.state.wy.us./adval/agland.htm July 13,2000, p. 1-3. **http://revenue.state.wy.us./** 2000 Agricultural Land Valuation Study. July 13,2000.

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ECONOMICS DEPARTMENT
South Dakota State University — Phone: (605) 688-4141
Box 504 — Fax: (605) 688-6386
Brookings, SD 57007-0895 — E-mail: Stover_Penny@sdstate.edu

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